Astronomy and Geophysics

Programme course

6 credits

Astronomi och geofysik

TFYA60

Valid from: 2017 Spring semester

Determined by
Board of Studies for Electrical Engineering, Physics and Mathematics

Date determined
2017-01-25

Offered for the last time
Autumn semester 2025

Main field of study
Applied Physics, Physics

Course level
First cycle

Advancement level
G1F

Course offered for
- Physics and Nanotechnology
- Applied Physics and Electrical Engineering - International, M Sc in Engineering
- Applied Physics and Electrical Engineering, M Sc in Engineering

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Basic knowledge in mechanics and modern physics. Modern physics can be taken in parallell with this course.

Intended learning outcomes
The aim of the course is to give the student basic knowledge in astronomy and get an introduction to geophysics. After passing the course the student should be able to:

- Describe the origin and development of astronomical objects, their properties and the structure of the universe.
- Use space coordinates to find objects in the sky.
- Solve simpler problems in the field of astronomy and astrophysics.
- Present a subtopic in geophysics in written and/or oral form after a literature search.

Course content

The course gives an overview of our place in the universe and reflects today's knowledge against an historical background. Properties of the solar system, its age and development. The sun, our nearest star. Properties and development of stars, their birth, life and death. Our galaxy, the Milky Way. Other galaxies, groups and supergroups. Cosmology.
The student will choose a subtopic within geophysics to present orally and/or in writing.

Teaching and working methods

The teaching is given as lectures and supervisions during the observation sessions. The students should also give an oral and/or written presentation of a subtopic in geophysics.

Examination

UPG1	Assignment	1.5 credits	U, G
TEN1	Written examination	4.5 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för fysik, kemi och biologi

Director of Studies or equivalent

Magnus Boman

Examiner

Vallery Stanishev

Course website and other links

Education components

Preliminary scheduled hours: 28 h
Recommended self-study hours: 132 h

Course literature

Additional literature

Books

Freedman & Kaufmann, *Universe* 9
Publisher: W. H. Freeman

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.